

Name: _____

Math 10FLPC H.

Date: _____

Chapter 3 Factors and Products

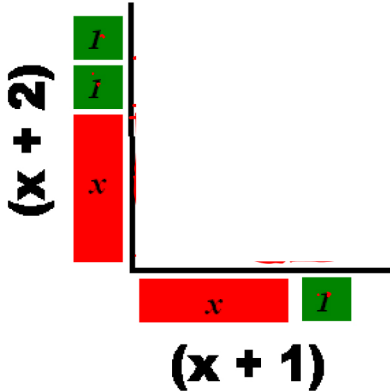
3.5 Polynomials in the Form x^2+bx+c

Goal: To use algebraic strategies to multiply binomials and to factor trinomials.

In this section we will multiply binomials (expand) to find they result in trinomials and factor trinomials into **two binomials**. **Remember: Factoring and expanding are processes.** First we'll look at the forward direction of multiplying binomials.

Example 1: Expand $(x+2)(x+1)$:

This can be visualized with algebra tiles...fill in with tiles to form a rectangle.



Often we don't have algebra tiles so we need to learn other methods to multiply binomials.

Example 2: Multiply the following binomials

a) $(x - 4)(x + 2)$

method 1: distributive property Foil

method 2: rectangle diagram

b) $(8 - b)(3 - b)$

method 1: distributive property

method 2: rectangle diagram

Example 3: Expand, then simplify.

a) $(x + 6)(x - 3)$

b) $(n - 6)(n - 4)$